

OTT Times

TRACKING THE ADVANCEMENT OF TRANSPORTATION TECHNOLOGY

VOLUME FOUR • ISSUE FOUR • U.S. DEPARTMENT OF ENERGY • OFFICE OF TRANSPORTATION TECHNOLOGIES, WASHINGTON, D.C. FALL 1996

On The Move

Dear Reader:

Our feature story this issue is a quick summary of our newly released Strategic Plan, a culmination of a year's worth of effort here at OTT. We've done strategic planning before, but what differentiates this effort from ones past is the diverse input it brings together, and the creation of a specific OTT Mission Statement and common Vision. We at OTT are leading the drive to ensure that "within the first decade of the twenty-first century, the United States will turn the corner in the growth of petroleum use for highway transportation." The full Strategic Plan document goes on to detail a specific timeline for the projects of each of our four offices in their contribution toward meeting this goal.

As the Strategic Plan reminds us, American demand for imported petroleum is rapidly increasing, with detrimental impact on our nation's security, economy and environment. While reducing this impact has always been our goal, this is the first time a goal so specific has been formally adopted.

Like many organizations, private and public sector alike, we have realized that the best way to ensure that everybody is working toward the same goal is to painstakingly identify it and articulate it to every stakeholder. I'm sure you've gone through a similar process in your own organization.

We're proud of the Strategic Plan, and are doing a lot to promote it through our speaking engagements and informational resources such as this newsletter. I hope that the quick summary whets your

(Continued on page 2.)

OTT releases Strategic Plan—common vision established across a diversity of activities

Following is a summary of OTT's Strategic Plan—see "On the Move" column opposite for details of its creation. A full text of the Strategic Plan is available by contacting the Editor or visiting the OTT website at <http://www.ott.doe.gov>.

The U.S. faces a number of challenges related to petroleum use. Our demand for petroleum is increasing, but our production is decreasing, putting us increasingly at the mercy of unstable and/or unfriendly foreign oil suppliers. Petroleum-burning vehicles emit a number of recognized pollutants, and many federal and state regulations are calling for more stringent vehicle emissions standards, presenting serious challenges to manufacturers and fleet operators. The trade deficit caused by oil imports represents a transfer of wealth and jobs from the U.S. to foreign oil suppliers, stifling domestic economic growth. In addition, during the past 15 years there has been a decline in employment in the domestic motor vehicle manufacturing industry; there is a current need for the U.S. to further develop its advanced transportation technologies to regain the domestic market share and to seize opportunities abroad.

Therefore, OTT is addressing these challenges by developing and promoting the commercialization of advanced transportation vehicles which use less petroleum and/or cleaner, domestically sourced non-petroleum fuels, as well as developing and promoting alternative fuels technologies. Most of OTT's programs are conducted in cost- and resource-sharing partnerships with private industry.

Vision

Within the first decade of the twenty-first century, the United States will turn the corner in the growth of petroleum use for highway transportation.

In developing and implementing the OTT Strategic Plan, the issues and concerns of a number of customer groups and stakeholders are identified and addressed, including those of:

- Light Vehicle Manufacturers & Suppliers,
- Heavy Vehicle (Truck) Manufacturers & Suppliers,
- Alternative Fuel Producers & Suppliers,
- Federal, State & Local Governments and Public/Private Fleets,
- Congress,
- Trade Organizations & Special Interest Groups,
- State and Local Governments & Fleets,
- Insurance/Public Safety Organizations

(Continued on page 4.)

INSIDE THIS ISSUE

NBB creating a biodiesel market	2
OTT on the web	3
Mr. Hale, OTT's Sr. Tech. Advisor	3
A colorful way to learn	4
Coming events	4

A Report From: The National Biodiesel Board

Biodiesel is a domestically sourced, renewable fuel made from vegetable oils such as soybean oil. It allows operators to meet tougher air quality requirements with little or no engine modifications and provides a cleaner-burning, better-smelling alternative to diesel fuel derived from petroleum.

The National Biodiesel Board (NBB), formerly known as the National SoyDiesel Development Board, is a trade association dedicated to industrialization and commercialization of biodiesel. The NBB invests in biodiesel research and market-development efforts with the guidance of its volunteer board of biodiesel stakeholders. The NBB does not sell fuel, but has positioned itself as a central body for the exchange of information in the industry, which includes feedstock providers, government agencies, operators, engine manufacturers, fuel providers and many other stakeholders.

Although serving an industry less than five years old, NBB has established a number of aggressive goals, and is successfully meeting them. For example, its goal of helping the industry operate the first dedicated biodiesel refinery by 1997 was actually achieved in 1995. A key short-term milestone is to help drive annual biodiesel sales to the 34 million gallon level by 1998.

In order to help the industry meet that goal, NBB has created a Biodiesel Marketing Plan, which details the exact steps associated with selling volumes of biodiesel in the priority markets indicated in its Strategic Business Plan—Transit, Regulated Fleets, Marine and Underground Mining.

NBB is also investigating increasing interest in the Aviation and Premium Diesel Markets, and is prepared to make in-depth assessments of other niche markets as they are identified.

NBB is proud of the words of Dr. Davis Clements, former Director of USDA-CSRS Office of Agricultural Materials, when he said that "The origins and activities of the National Biodiesel

Board have provided a textbook example of how the private sector, commodity groups, academia and government agencies can and should work together to establish a sound basis for a new technology and its entry into the market."

For more information on the benefits of biodiesel fuel, or about the National Biodiesel Board, contact the office of Jeffrey M. Horvath, Chief Executive Officer, National Biodiesel Board, P.O. Box 104898, Jefferson City, MO 65110-4898, 573-635-3893.

"Association News" appears in each issue of *OTT Times*. The column is presented as a forum for the featured transportation-related trade association, and is written by facts provided by them. OTT does not independently verify claims made by the association, and the column does not necessarily reflect the office's beliefs or opinions. If you would like to find out more about how your association can be featured, please contact the Editor.

OTT Times



**Office of Transportation
Technologies
U.S. Department
of Energy**

Published quarterly in Washington, DC by the Office of Transportation Technologies (OTT).

The content of this periodical is reprintable without permission.

Thomas J. Gross
Deputy Assistant Secretary for OTT

Ann Hegnauer
Manager, Technology Transfer for OTT

Correspondence concerning this periodical, including requests for additional copies, or to be added to the mailing list, may be directed to:

Ann Hegnauer
Room 6B094, EE-30
Forrestal Building
1000 Independence Ave., SW
Washington, DC 20585
Telephone (202) 586-8014
Facsimile (202) 586-1637

On The Move

(Continued from page 1.)

appetite, and you'll find it of benefit to read the entire document. I'll be glad to send you a copy, or you can read it any time—day or night—at our web site: <http://www.ott.doe.gov>.

Speaking of our web site, this issue also includes an article on all the new content you'll find on our homepage, but I would also like to mention an *OTT Times*-specific addition. As you know, we've had Adobe Acrobat versions of the last several issues of the newsletter available on the web. Starting with this issue, we are also placing an "all-text" version of the articles on the site. While not as pretty, the text versions will make it easy for you to download articles directly into your desktop publishing system, and

use them in your own publications. No permission is needed to reprint, but please do mention *OTT Times*, and include the appropriate contact information (at left) so that your readers can request a free subscription.

Until next time—

Ann Hegnauer

The OTT Website—spreading the word about advanced technology

With OTT and its partners leading the way in developing the world's most advanced transportation technologies, it makes sense that word of these efforts be disseminated using today's most advanced communications medium—the world wide web (WWW).

According to OTT's WWW project leader Frank Mallgrave, the OTT website has been completely rebuilt with the needs of OTT's diverse customers and stakeholders in mind. The goal is to give everyone OTT serves fast access to up-to-the-minute information on every aspect of OTT and advanced transportation.

The site includes descriptions of R&D programs underway in all technology areas, details of latest transportation-related regulations, messages from each OTT office director, the full text of OTT's

Strategic Plan, an electronic version of this newsletter, links to a diversity of resources related to advanced transportation—even a tip-sheet on how you can drive more efficiently and save fuel and money, and much more. In short, there's something valuable for everyone from the consumer to the fleet operator to the leading-edge engineer.

Mallgrave notes that the “always available” nature of information on the web will not only allow people to readily access previously hard-to-find materials, but also bring in a number of “surfers” who find the site serendipitously through search engines or links. In this way, it offers the opportunity to educate many new people about America's energy vulnerability and the exciting technologies being developed to displace foreign oil with more efficient vehicles and greater

use of domestically sourced alternative fuels.

The website content is ever-changing, and new material will be continuously added, especially in response to visitors' comments and requests through the site's e-mail link.

You are invited to visit the site at <http://www.ott.doe.gov>. Let us know what you think!



Mr. Hale, OTT's Sr. Technical Advisor



Jack Hale

“I like to be involved in a lot of different things—to be engaged in a number of different engineering disciplines, and to participate in integrating these disciplines to accomplish a significant goal,” said OTT's Jack Hale. In his role as Senior Technical Advisor, he is enjoying the opportunity to do so.

Reporting directly to OTT Deputy Assistant Secretary Tom Gross, Jack works on high-level special assignments, usually activities where multiple offices are involved. He has played a key role in developing DOE's Natural Gas Strategic Plan and participated in the Office of Energy Efficiency and Renewable Energy's strategic realign-

ment activities. Most recently, he has had the lead responsibility for developing the OTT Strategic Plan, which was released on August 8, 1996.

“The challenge with the Strategic Plan was pulling together a lot of different perspectives from many different customers, stakeholders, and program participants and preparing a cohesive strategy everyone could support and pursue,” he said.

Jack equates the process to systems engineering, in which one first defines the goal, then pulls together diverse optional approaches, and then evaluates and selects the best of components, which eventually leads to the integration of a working “whole” that meets the original specific goal. It's a method with which he's very familiar, having earned a Masters Degree in Mechanical Engineering, and having worked in a diversity of R&D and project management roles.

Before joining DOE in 1975 (originally working on the Solar Energy Demonstration project), Jack worked in industry, including Du Pont Engineering Development Laboratory, where he developed new products and manufacturing processes. This experience gave him valuable insights in carrying projects from

concepts through demonstrations of working prototype units. Jack holds two U.S. patents, including one for a rechargeable zinc-air battery, which has potential application in transportation vehicles. He also worked at NASA Langley Research Center, where he conducted R&D and developed solid fuel rocket motors.

Jack notes that he's always had an intense interest in transportation, back to his days building countless model airplanes as a child. As part of his hobby, Jack has acquired a collection of operating model engines, including a Wankel rotary engine, a solar powered and an alcohol fueled Stirling engine, several ethanol fueled diesel engines, and spark ignition gasoline engines. Recently, Jack's focus has been on computers, especially graphic simulations of and the operation of a robotic arm driven by stepper motors controlled by programmed computer commands.

Back at the office, Jack's current responsibility is creating an OTT-wide Plan for Transportation Fuels, looking at the promise of a variety of domestic fuels which are economical and environmentally clean.

Kids coloring their way to alternative fuels knowledge

An enterprising Postmaster and her staff are helping get the word out to community youngsters about the clean air advantages of alternative fuels—they're speaking at school assemblies and giving each child an original "Energy Eagle" coloring book they designed and created from scratch.

Peoria Postmaster Susan Warren says that she had the idea for the informative coloring book for awhile, but lacked the funds to do it properly. A matching funds grant from OTT helped give the project the kick start it needed, and began a successful win-win partnership between two disparate government organizations.

In addition to producing the coloring book, the Peoria Post Office also used the shared funds to sponsor a student poster contest. The coloring book and poster contest recently got great media attention in the Peoria area and several of the

winning entries will be displayed in the local post office for all to see. Also, three local television networks picked up the



story of the Peoria post office converting 113 postal vehicles to compressed natural gas.

Postmaster Warren notes that the efforts fit in well with their long-standing ChildLink program, which trains children in safety procedures and reminds them that mail carriers, like police officers, can help them if they are lost or otherwise in trouble. "Cleaning up our air for the children is another important safety consideration," she said.

In addition, the U.S. Postal Service is reportedly planning to distribute the coloring book nationally. Still, professional attention notwithstanding, Warren notes that the best public relations people might just be the "colorers" themselves. "The kids are involved and learning about cleaner air and alternative fuels," said Warren, who used to be a school teacher. "And when the kids know, the parents know too."

OTT Strategic Plan

(Continued from page 1.)

- Federal Government, Departments, & Agencies, and
- Agricultural Industries.

OTT programs are also often driven by legislation and executive directives and Federal and State regulatory actions.

The OTT Strategic Plan includes a slate of activities and target completion dates for each of OTT's four customer-focused component offices. OTT final products are technologies, and it is vital that U.S. industry pick up the ball to commercialize these technologies in a marketable product. This is another reason for the strong partnerships that each office forms with the private sector at every stage of development.

OTT's Office of Advanced Automotive Technologies is working to research, develop and validate technologies that will enable the introduction of practical passenger cars with greater fuel economy and/or lower emissions. Projects include the development of technologies that will lead to more efficient automotive propulsion systems, as well as practical natural gas, ethanol and electric vehicles, all within the next two decades.

OTT's Office of Heavy Vehicle Technologies focuses on the diesel engine, pursuing technologies to achieve 55 percent efficiency with ultra-low emissions, increase overall truck system efficiency and investigate fuels formulation and blending strategies, fuels sensing and control strategies that will enable a greater use of cleaner, domestically-sourced non-petroleum fuels.

The primary goal of OTT's Office of Fuels Development is to develop ethanol as an economically viable transportation biofuel from cellulose-containing agricultural wastes (such as corn fiber and rice straw) and dedicated energy crops (such as poplar trees and switchgrass). Ethanol is expected to be competitively priced with gasoline in the blend market by 2005 and in the pure ethanol market by 2015.

OTT's Office of Technology Utilization is working to ensure that newly developed transportation technologies receive acceptance in government and private fleets, followed by widespread market penetration in both domestic and foreign markets. This office is involved with developing fleets and infrastructure, field testing and evaluation and external communication and outreach.

COMING EVENTS

DECEMBER 3-4, 1996 CLEAN CITIES FUND RAISING WORKSHOP Denver, Colorado

Contact Jeff Hardy at
(202) 586-1885, or Tommy Foltz
at (202) 586-4264

DECEMBER 11-13, 1996 NAEVI '96 San Diego, California

Join key players of the electric vehicle industry for the 1996 North American EV & Infrastructure Conference. Sponsored by the Electric Vehicle Association of the Americas. Contact Jo Rivers, Show Coordinator at (415) 964-2050.

DECEMBER 12, 1996 SAN DIEGO CLEAN CITIES DESIGNATION San Diego, CA

Contact Jeff Hardy at
(202) 586-1885, or Tommy Foltz
at (202) 586-4264

DECEMBER 18, 1996 DETROIT-TORONTO CLEAN CITIES DESIGNATION Detroit, MI

Toronto, Ontario, Canada

Contact Jeff Hardy at
(202) 586-1885, or Tommy Foltz
at (202) 586-4264

